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- 5 1. A system for linking to a document, comprising:
a document model, representative of the document,
having a plurality of data structures representative of
components within the document; and
a thumbnail image registered with the document model
such that selected coordinates within the thumbnail image
are each mapped to a data structure selected from the
plurality of data structures.
- 10 2. The system as recited in claim 1, wherein the
document is a text document and the components comprise one
or more page components, textual block components, textual
line components and word components.
- 15 3. The system as recited in claim 1, wherein the
document is an XML document.
4. The system as recited in claim 1, wherein the
components comprise images.
5. The system as recited in claim 4, wherein the
images comprise vector graphics.
- 20 6. The system as recited in claim 1, further
comprising a word-at-a-time display associated with the
thumbnail image for displaying the data represented by
selected components from the document model, the components
selected in response to interaction with the thumbnail.
- 25 7. The system as recited in claim 1, wherein the
components are individually addressable.

8. A method for registering a low-resolution thumbnail image with a document model having a plurality of data structures representative of components within a document, the method comprising the steps of:

5 creating a full-sized bitmap image representative of the document;

identifying coordinates within the full-sized bitmap image;

10 mapping selected coordinates within the full-sized bitmap image to components selected from the document model; and

reducing the full-sized bitmap image into the low-resolution thumbnail image.

9. The method as recited in claim 8, wherein the document is a text document and the components comprise one or more page components, textual block components, textual line components and word components.

10. The method as recited in claim 8, wherein the document is an XML document.

20 11. The method as recited in claim 8, wherein the step of mapping further comprises the step of providing an address link to a computer storage location between the coordinates and each component selected from the document model mapped to the coordinates.

25 12. The method as recited in claim 8, wherein the step of identifying further comprises the step of identifying coordinates that define a unit of text.

13. The method as recited in claim 8, wherein the step of reducing further comprises the step of sub-sampling the full-sized bitmap image.

Sub 37 14. A method for retrieving information from a document represented by a thumbnail image having coordinates registered with components selected from a document model representative of the document, the method comprising the steps of:

10 sensing the position of a cursor over the thumbnail image;

determining the coordinates within the thumbnail image corresponding to the sensed cursor position; and

15 retrieving data from the document corresponding to the component from the document model registered with the determined coordinates.

15. The method as recited in claim 14, further comprising the step of streaming to a word-at-a-time display the data retrieved from the document.

20 16. The method as recited in claim 15, further comprising the step of altering the appearance of the thumbnail image to provide an indication of the information streamed to the word-at-a-time display.

25 17. The method as recited in claim 15, wherein the step of streaming is continued until a delimiter reflecting a unit of document organization is reached.

Sub 37 18. A computer-readable medium comprising instructions for retrieving information from a document represented by a

thumbnail image having coordinates registered with components selected from a document model representative of the document, the instructions performing the steps of:

- 5 sensing the position of a cursor over the thumbnail image;
- determining the coordinates within the thumbnail image corresponding to the sensed cursor position; and
- retrieving information from the document corresponding to the components from the document model registered with
- 10 the determined coordinates.

19. The computer-readable medium as recited in claim 18, further comprising instructions for performing the step of streaming to a word-at-a-time display the information retrieved from the document.

- 15 20. The computer-readable medium as recited in claim 19, further comprising instructions for performing the step of altering the appearance of the thumbnail image to provide an indication of the information streamed to the word-at-a-time display.

- 20 21. The computer-readable medium as recited in claim 19, wherein the step of streaming is continued until a delimiter reflecting a unit of document organization is reached.

- 25 22. A computer-readable medium comprising instructions for registering a low-resolution thumbnail image with a document model having a plurality of data structures

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    identifying coordinates within a full-sized bitmap
image;

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reducing the full-sized bitmap image into the low-resolution thumbnail image.

24. A hand-held computer, comprising:

a display adapted to display a thumbnail image
registered with the document model and a word-at-a-time
display;

25 wherein the word-at-a-time display is adapted to
display data represented by components selected from the

document model in response to interaction with the thumbnail.

25. The hand-held computer as recited in claim 24, wherein the document is a HTML document.

5 26. The hand-held computer as recited in claim 24, wherein the document model comprises one or more hyperlinks and the word-at-a-time display is adapted to display hyperlinks in a manner that attracts the visual attention of a user.

10 27. The hand-held computer as recited in claim 25, wherein the manner that attracts the visual attention of the user is flashing the hyperlink in the word-at-a-time display.

15 28. The hand-held computer as recited in claim 24, wherein the thumbnail image is adapted to track the context of information streamed to the word-at-a-time display.

20 29. The hand-held computer as recited in claim 28, wherein the document comprises one or more hyperlinks and the thumbnail image is adapted to display the context of streamed hyperlinks in a manner adapted to visually attract a user.

25 30. The hand-held computer as recited in claim 29, wherein the manner adapted to visually attract the user comprises flashing a portion of the thumbnail image corresponding to the streamed hyperlink.